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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------|---------------------|------------------|
| 10/688,726      | 10/17/2003  | Mohamad Towfik Krounbi | SJO919960080US3     | 1763             |

7590 09/24/2004

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| EXAMINER |
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TUGBANG, ANTHONY D

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

3729

DATE MAILED: 09/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/688,726 | <b>Applicant(s)</b><br>KROUNBI ET AL. |  |
|                              | <b>Examiner</b><br>A. Dexter Tugbang | <b>Art Unit</b><br>3729               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-48 is/are pending in the application.
- 4a) Of the above claim(s) 35-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30, 32-34 and 43 is/are rejected.
- 7) ☒ Claim(s) 31 and 44-48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/17/03</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Species C, Claims 43-48 in the reply filed on 6/17/04 is acknowledged.
2. Claims 35-42 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/17/04.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 30, 32, 33 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Cole et al 5,452,164.

Regarding Claim(s) 30 and 43, Cole discloses a method of making a magnetic head comprising: forming a coil layer 108 (in Fig. 5) with the coil layer being embedded in an insulation stack I1, I2; forming the coil layer with a filament which spirals in a flat coil plane which is parallel to the flat planar head surface and about a central axis which is perpendicular to the flat planar head surface and the flat coil (see Figs. 3 and 4); forming first and second pole pieces PT1a, PT2a with the insulation stack sandwiched between the first and second pole pieces; forming the first pole piece with a first horizontal component PT1b with a first edge

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(vertical edge of PT1b at the ABS); forming the second pole piece with a second horizontal component PT2b with a second edge (vertical edge of PT1b at the ABS); forming a write gap layer G between the first and second edges; forming a first shield layer S1 (in Fig. 6) having a third edge (vertical edge of S1 at the ABS); forming a magnetoresistive, or MR, sensor 66 and first and second gap layers G1, G2 with the MR sensor sandwiched between the first and second gap layers and the first and second gap layers between the third edge (of S1) and the first horizontal component PT1b.

Regarding Claim(s) 32, the first horizontal component PT1b of Cole has a fourth edge (read as the vertical surface of PT1b at the ABS) that interfaces the second gap layer G2 to that the first horizontal component serves as a second shield layer S2 (in Fig. 6) for the MR sensor.

Regarding Claim(s) 33, Cole further teaches an active region that defines both a read track width and a write track width (see dimension W in Fig. 6).

Regarding Claim(s) 47 and 48, Cole further teaches that the coil includes a filament, or filament material, that continuously spirals and recedes from the central axis (see Fig. 4).

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cole et al in view of Krounbi et al 5,438,747.

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Cole discloses the claimed manufacturing method as relied upon above. Cole does not mention that the MR sensor is formed with only one elongated MR stripe. Cole appears to teach a dual MR stripe or two MR stripes next to each other.

Krounbi shows one elongated MR stripe (MR in Fig. 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the MR sensor of Cole by utilizing only one elongated MR stripe, as taught by Krounbi, to positively form art recognized equivalent magnetic heads.

***Allowable Subject Matter***

7. The following is a statement of reasons for the indication of allowable subject matter.

Regarding Claim(s) 44 and 31, the prior art does not teach all of the limitations of the claimed invention including either forming an insulating layer between the MR sensor and the first pole piece, or forming an insulating layer between the MR sensor, the first and second gap layer, the first shield layer, the first horizontal component and the first recessed horizontal component so as to separate the MR sensor, the first and second gap layer, the first shield layer, and the first horizontal component from the first recessed horizontal component.

8. Claims 31 and 44-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Conclusion***

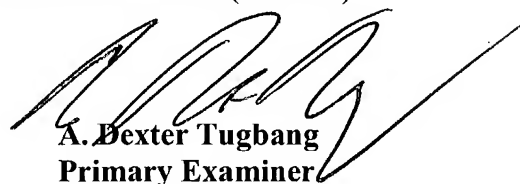
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 703-308-7599.

The examiner can normally be reached on Monday - Friday 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

September 19, 2004